

Aurora CS Startup/Shutdown – Standard Operating Procedure

Reagent	Use
QC SpectroFlo beads	Daily Performance
Spectro sort beads	Setting Correct Drop delay
Bleach	Cleaning Sample line
Contrad	Cleaning Sample line
Distilled Water	Instrument shutdown
Sheath Fluid (lifecycle 463002-10)	Sheath fluid

Refilling Sheath Tank: Label tank with autoclave tape and autoclave the empty sheath tank on Cycle 2, gravity, for 60 minutes at 121°C. When the tank is cooled, fill with sterile PBS in a biosafety cabinet. Always keep a spare filled tank while sorting.

Startup

1. Disconnect the waste line and sensor. Empty the tank in the sink after adding 3ml bleach. Reconnect the tank but keep the lid loose to relieve back pressure.
2. Locate the sheath and air tubing, disconnect them from the small water tank, spray with 70% ethanol and connect them to the sheath tank after wiping them down with a Kimwipe sprayed with 70% ethanol. Finger tighten the lid of the tank. Turn on the house air.
3. Turn on the computer (password: BDIS#1), followed by the instrument (CS), and finally the SpectroFlo software in the same order.
4. Click fluidics startup while the instrument is warming up and follow the instructions.
5. Move the aspiration buckets back manually and keep the green waste container (tips box) under the flow cell area.
6. Open the default experiment and open the sorter control. Turn on the stream with bypass nozzle for 10 minutes.
7. Run clean flow cell with bleach and water.
8. Turn off the stream, remove the bypass nozzle and clean the area with wet q-tip first and then with a dry q-tip.
9. Follow the cleaning procedure for the mirror, viewing laser, and camera with wet q-tip and then wipe them with Kimwipes.
10. Remove the deflection plates and clean them with Kimwipes. Place them back.
11. Air dry the appropriate nozzle before inserting it. Start the stream by selecting the correct serial number of the nozzle.
12. Make sure the stream is in the center. If it is not in the center turn the knob on the side to adjust and keep it in the center.
13. Let the stream run for 15 minutes and adjust the amplitude to match known settings for the Nozzle/pressure. Record daily nozzle specific-settings in online form.
14. Make sure the drop center matches and then turn on sort monitoring (equivalent to sweet spot).
15. Run QC beads (minimum 100 events/sec) by diluting in sheath. Keep the flow rate at 1 for QC.
16. Run the QC in acquisition in the default template and then switch to QC.
17. After QC is passes, run water for 5 minutes.
18. Prepare Spectro sort beads (3 drops in 300ul PBS) and gently mix by flicking the tube. Do not vortex. Drop delay will not pass if there are less than 4000 events per second.
19. Check the aim settings and choose drop delay. Check sort mode to multiway. Flow rate should be 3. Click auto drop delay.
20. After auto drop delay passes, run bleach for 5 minutes and water for 5 minutes.
21. Both diluted QC and Spectro sort beads are good for one week when stored in the dark at 4°degrees

Shutdown

1. Remove sheath and air connector from the sheath tank and connect them to the small water tank.
2. Prepare 2 tubes with 3ml water, 1 tube with bleach and 1 tube with 10% Contrad.
3. Click fluidics shutdown and follow the instructions.

Standard Operating Procedure			
Cytek Aurora CS SOP	Approval Date	Approved By	
	2/26/2024		
Revision History			
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